



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/046,141 | 01/16/2002 | Tetsuo Yamaguchi | 2870-0177P | 3642 |
| 2292 | 7590 | 10/05/2004 | EXAMINER | |
| BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747 | | | CHEA, THORL | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1752 | |

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/046,141

Applicant(s)

YAMAGUCHI, TETSUO

Examiner

Thorl Chea

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on July 12, 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 1752

DETAILED ACTION

Specification

1. Claims objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. 11-14. The invention claimed in claims 1 is directed to the compound in group (iv) that has satisfying at least condition (i) to (iii), whereas claims 13-14 are directed to the compound (i) to (iv).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The use of the term “compounds or compound” associated with (i), (ii), (iii) renders the claims unclear. First, the language “(a)t least second compound having formula satisfying (iv)” is unclear whether the claiming is directed to the claiming of formula (1), (2), (3) in (iv) or directed to the property associated with the formula (1), (2), (3) in (iv). Second, there is confusion between the use of the term “characteristic satisfying at least (i) to (iii)”, and the term “compounds” in (i), (ii) (iii). See the language in claims 1-14. The term “characteristic” may be an inherent property associated to the compound, and the compound is a chemical formula. Therefore, the use of such term alternatively renders the claims confusing.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al (Ito) in view of JP11-149136 (JP'136) and Adin et al (Adin).

Ito a photothermographic material containing non-photosensitive silver halide, photosensitive silver halide, reducing agent for silver ions and binder and the compound of formula (1) to (3) claimed in the present claimed invention, and the amount thereof is within 1×10^{-6} mol to 1 mol/mol of silver halide. Note to the compound of formula (1) to (3) in column 18 and the amount thereof in column 33, lines 22-25.

The JP'136 discloses a heat-developable material containing non-photosensitive silver halide, photosensitive silver halide, reducing agent for silver ions and binder and the compound exemplified in the present application disclosure which is within the scope of formula (I) claimed in the present invention, and the amount thereof is from 1×10^{-6} mol to 1 mole/mol of silver halide. See the compound in column 1 (or Its English equivalent, US Patent No. 6,177,240, in columns 7-24; and in column 26, lines 37-40). This compound is within the scope of formula (I), which contains nitrogen containing heterocyclic compound, and the functional groups such as $-CO_2M$ which is within the scope of A-B of the formula (I). The compound provide photothermographic material high in D_{max} and sensitivity, enhanced enough in contrast, small

Art Unit: 1752

in photographic performance due to fluctuation of development conditions and superior in effect of restraining dependence on development condition.

Adin discloses a spectrally sensitize within the scope of formula (I) of the claimed invention, and the amount thereof is from 1×10^{-8} to 2×10^{-3} mol per mol of silver in the emulsion layer. The compound is capable of enhancing both intrinsic sensitivity and the spectrally sensitivity of the silver halide emulsion, and the activity of the compound can be easily varied with substituents to control their speed and fog effects in a manner appropriate to the particular silver halide in which they are used. Note to the compound in column 4, especially lines 26-38 and 55-65, and the amount thereof in column 60, lines 5-18.

The teaching in Ito discloses a photothermographic material containing compound of formula (1) to (3) and the compound inherently meets the conditions (i) to (iii) presented in the claimed invention. The compound in (iv), formula (1) to (3) has been known as nucleating agent, and the compound which meet criteria (i) to (iii) has been known as contrast enhancing agent such as hydrazine compound exemplified in Ito in column 37-80. See also the nucleating agent in column 23-32.

Ito fails to disclose the compound of formula (I) which however has been known and taught in JP'136 and Adin. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the compound taught in JP'136 to provide the photothermographic material with high in Dmax and sensitivity, enhanced enough in contrast, small in photographic performance due to fluctuation of development conditions and superior in effect of restraining dependence on development condition, or the compound taught in Adin in

Art Unit: 1752

the material taught in Ito enhance both intrinsic sensitivity and the spectrally sensitivity of the silver halide emulsion to provide the invention as claimed.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,764,816 (Ohzeki) in view of Ito et al (US Patent No. 6,150,084). The compound of group (iv) has been known as nucleating agent and taught in Ito in column 18, compounds (1), (2), (3). It would have been obvious to the worker of ordinary skill in the art at time the invention was made to use the nucleating agent taught in Ito to improve the image contrast of the material claimed in the '816 patent, and thereby provide an invention as claimed.

Response to Arguments

8. Applicant's arguments filed July 2004 have been fully considered but they are not persuasive for the reason set forth in the rejection above and the response to the applicants' argument set forth in the previous office action. The Declaration by Mr. Tetsu Yamaguchi submitted on July 12, 2004 fails to overcome the established prima facie case of obviousness

Art Unit: 1752

rejection. First, the Declaration is not commensurate with the scope of the claimed invention. The Declaration shows only the compound within the scope of (iv) wherein the developed power is between 1300 to 1400 and covering power is from 220-230, wherein the scope of the claimed invention contains the compound in (iv), and the developed silver level of 200 –5000 % and the covering level of 120-1000 %, and the compounds that producing a chemical species that can be form development initiation points on and in the vicinity of the non-photosensitive silver salt of an organic acid. The Declaration fail to show results of the lower and upper limit of the range claimed in the present claimed invention. The value of 220-230 % and 1300-1400 is within the claimed range, but not value outside the claimed range has been shown. Therefore, the criticality of the claimed range cannot be determined. Second, the results would have been expected from the teaching of Ito and JP'136. See Ito in column 97-98, Table 23, wherein the value of Dmin is lower than that shown in the Declaration, and the value of gamma samples is range from 14-15 substantially similar to that presented in the Declaration. See also the JP'136 (US 6,177,240), wherein the value of gamma is range from 13.8 to 14.6. Therefore, the differences between the value of gamma of the material shown in the Declaration and shown in the applied prior art of record found relatively small, and would not have found unexpected by the worker of ordinary skill in the art at the time the invention was made.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


Art Unit: 1752

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tchea 
March 2, 2004

Thorl Chea
Primary Examiner
Art Unit 1752

